

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A process comprising:
 - (a) contacting a fuel containing organosulfur impurities with an organic hydroperoxide in the presence of an oxidation catalyst to form an oxidized fuel, wherein a substantial portion of the organosulfur impurities are converted into sulfones and a residual amount of organic hydroperoxide remains in the oxidized fuel;
 - (b) extracting the sulfones from the oxidized fuel to form a fuel having a reduced amount of sulfones and a residual amount of organic hydroperoxide; and
 - (c) contacting the fuel from step (b) with a Group 4 to 11 transition metal-containing decomposition catalyst at a temperature in the range of 20 to 150°C.
2. (original) The process of claim 1 wherein the organic hydroperoxide is tertiary butyl hydroperoxide.
3. (original) The process of claim 1 wherein the oxidation catalyst is a titanium-containing silicon oxide catalyst.
4. (original) The process of claim 1 wherein the sulfones are extracted by solid-liquid extraction using at least one sulfone adsorbent.
5. (original) The process of claim 1 wherein the sulfones are extracted by liquid-liquid extraction using at least one polar solvent selected from the group consisting of a C₁-C₄ alcohol, a C₃-C₈ ketone, water, and mixtures thereof.
6. (original) The process of claim 5 wherein the polar solvent is a mixture of methanol and water.

7. (currently amended) The process of claim 1 wherein the Group 4 to 11 transition metal-containing decomposition catalyst comprises a Group 4 to 11 transition metal and a support.

8. (original) The process of claim 7 wherein the Group 4 to 11 transition metal is selected from the group consisting of chromium, titanium, manganese, vanadium, iron, ruthenium, cobalt, and mixtures thereof.

9. (original) The process of claim 7 wherein the Group 4 to 11 transition metal is selected from the group consisting of chromium, titanium, iron, and mixtures thereof.

10. (original) The process of claim 7 wherein the support is selected from the group consisting of silicas, aluminas, silica-aluminas, and carbon.

11. (original) The process of claim 7 wherein the decomposition catalyst comprises chromium, silica, and optionally titanium.

12-18. (canceled)

19. (original) A fuel produced by the process of claim 1.

20. (canceled)